

REMARKS

Claims 1-58 were pending and stand rejected. Claims 1, 12, 14, and 40 have been amended. Claims 1-58 are pending after entry of this amendment.

The specification has been amended to correct typographical errors. No new matter is added by these amendments to the specification.

Applicants respectfully note that the Examiner indicated consideration of the Information Disclosure Statement filed on May 20, 2002, but did not indicate consideration of the Information Disclosure Statements filed on February 12, 2001, February 26, 2001, November 11, 2002, March 13, 2003, July 29, 2003, and September 11, 2003. Applicants respectfully request that the Examiner indicate consideration of the documents submitted with these Information Disclosure Statements, by initialing the PTO-1449 forms submitted therewith, and attaching same to the next communication to Applicants.

The Examiner objected to claim 40 because of an informality. Applicants have amended claim 40 to address this informality.

Claims 1-2, 7-12, 15-22, 27-32, 35-42, 47-52, and 55-58 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Deianov. Applicants respectfully traverse. As amended, claim 1 recites:

A method for virtualizing super-user privileges in a computer operating system including multiple virtual processes, the method comprising:
designating a plurality of virtual super-users, each virtual super-user being associated with a separate virtual process;
intercepting a system call for which actual super-user privileges are required; and
in response to the intercepted system call being made by a virtual super-user and pertaining to the virtual process of the virtual super-user:
granting actual super-user privileges to the virtual super-user; and
allowing execution of the system call.

The claimed invention relates to a method for virtualizing super-user privileges in a computer operating system including multiple virtual processes. While an actual super-user has access to all system resources, a virtual super-user has the power of an actual super-user with respect to only his own virtual process and is unable to interfere with other virtual processes or the underlying operating system.

Deianov does not disclose, suggest, or teach the claimed invention. Deianov discloses selective interception of system calls based on which processes made the system calls. Specifically, a modified loader program loads selected processes and creates an association between those processes and system call wrappers. When a system call is made, a determination is made as to whether the process that made the system call is one of the selected processes. If it is, then the system call wrapper executes instead of the system call itself executing.

First, while Deianov mentions that system administrators can specify which system calls should be intercepted by which processes, Deianov does not mention designating a plurality of super-users or root-users, let alone designating a plurality of virtual super-users. Thus, Deianov does not disclose “designating a plurality of virtual super-users, each virtual super-user being associated with a separate virtual process.”


Second, Deianov mentions intercepting system calls in order to extend and customize operating system functionality (2:3-4). Deianov also gives the example of intercepting system calls in order to manipulate operating system access privileges to provide security beyond that which is provided by the operating system. However, Deianov does not mention super-user privileges or root-user privileges. Thus, Deianov does not disclose “intercepting a system call for which actual super-user privileges are required.”

Accordingly, claim 1 is patentable over Deianov. Claims 21 and 41 similarly recite “designating a plurality of virtual super-users, each virtual super-user being associated with a separate virtual process” and “intercepting a system call for which actual super-user privileges are required” and are also patentable over Deianov for at least the foregoing reasons.

Claims 3-6, 13-14, 23-26, 33-34, 43-46, and 53-54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Deianov in view of Ault. Applicants respectfully traverse. These claims depend from their respective base claims, which were shown above to be patentable over Deianov. In addition, these claims recite other features not included in their respective base claims. Thus, claims 6, 13-14, 23-26, 33-34, 43-46, and 53-54 are patentable over Deianov in view of Ault for at least the reasons discussed above.

The claims not specifically mentioned above incorporate the features of their respective base claims and are patentable for at least the same reasons. Applicants respectfully submit that the pending claims are now allowable over the cited art of record and request that the Examiner allow this case. The Examiner is invited to contact the undersigned in order to advance the prosecution of this application.

Respectfully submitted,
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